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William James Hughes

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EXAMINER

HEWITT, JAMES M

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 10/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/633,471	HUGHES, WILLIAM JAMES	
	<b>Examiner</b>	<b>Art Unit</b>	
	James M. Hewitt	3679	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-28, 30-41, 43-50, 52-61 and 63-66 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-28, 30-41, 43-50, 52-61 and 63-66 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Specification***

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). The following does not find proper antecedent basis in the specification: the subject matter recited in lines 8-12 of claim 1, a plurality of transmission means, first plurality of transmission means, second plurality of transmission means; the limitations requiring the plug, splines and first conduits to be of unitary construction; the limitations requiring the socket, receptacles and second conduits to be of unitary construction.

### ***Claim Objections***

Claims 1-11, 13-17, 24-28, 30-41, 43-46, 48-49, 52-61 and 63-66 are objected to because of the following informalities:

In claim 1, lines 8-12, the phrase "wherein the plug assembly may be joined to the socket assembly by the securing device in a plurality of orientations..." should be amended to make clear that the plurality of orientations are not governed by the securing device.

In claim 7, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 8, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 9, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 13, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 14, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 15, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 16, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 17, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 24, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 25, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 26, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 27, it is unclear as to how the wire capable of carrying an electrical current relates to the transmission means recited in claim 18. For examination purposes, the transmission means has been considered to comprise the wire.

In claim 28, it is unclear as to how the at least one conduit containing material adapted to carry an optical relates to the transmission means recited in claim 19. For examination purposes, the transmission means has been considered to comprise the at least one conduit.

In claim 30, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 31, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 32, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 33, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 34, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 35, it is unclear as to how the limitation "wherein, when a plurality of splines on the plug mate with a plurality of receptacles in the socket, the plurality of first conduits are aligned with the plurality of second conduits" relates to the previously recited engaging step.

In claim 36, "the positioning step" lacks proper antecedent basis.

In claim 37, "the positioning step" lacks proper antecedent basis.

In claim 37, it is unclear as to how the plurality of splines relate to those recited in claim 35.

In claim 39, it is unclear as to how the inserting step relates to the engaging step in claim 35.

In claim 40, it is unclear as to how the inserting step relates to the engaging step in claim 35.

In claim 41, it is unclear as to how the coupling collar relates to the securing step.

In claim 43, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 44, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 45, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 46, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 48, it is unclear as to how the keys and keyways relate to the splines and receptacles recited in claim 47. For examination purposes, they have been considered to be one and the same.

In claim 49, it is unclear as to how the legs and recesses relate to the splines and receptacles recited in claim 47. For examination purposes, they have been considered to be one and the same.

In claim 52, line 7, both instances of "assembly" should be deleted.

In claim 57, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 58, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 59, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 61, it is unclear as to how the at least one conduit containing material adapted to carry an optical relates to the transmission means recited in claim 50. For examination purposes, the transmission means has been considered to comprise the at least one conduit.

In claim 63, "the first tubing section" and "the second tubing section" each lack proper antecedent basis..

In claim 64, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 65, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

In claim 66, "the first tubing section" and "the second tubing section" each lack proper antecedent basis.

Appropriate correction is required.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct

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from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-11, 13-28, 30-41, 43-50, 52-61 and 63-66 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-11, 17-28 and 34-41 and 47-61 of copending Application No. 10/671,141. Although the conflicting claims are not identical, they are not patentably distinct from each other because the only substantive difference between the conflicting claims is that the claims of the instant application are drawn to tubing and the claims of the '141 application are drawn to rods. Using tubing in place of rods is considered obvious and fails to render the conflicting claims patentably distinct. And note that the first rod, splines and connectors (conduits) are considered to inherently have unitary construction. As do the second rod, receptacles and connectors (conduits). Each rod is inherently unitary, as is each spline and receptacle, and each of the connectors.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.



***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3, 7-11, 13-20, 24-28, 30-41, 43-46, 50, 52-53, 57-61 and 63-66  
rejected under 35 U.S.C. 102(b) as being anticipated by Moon (US 2,750,569).

With respect to claim 1, Moon discloses an apparatus comprising: a first tubing (1) and a second tubing (2); a plug fixedly engaged to a first tubing proximate end and having a plurality of first splines (10) and a plurality of first conduits (26); a socket fixedly engaged to a second tubing distal end and having a plurality of receptacles (defined by splines 4) and a plurality of second conduits (holding prongs 21); a securing device (11) for securing the plug assembly to the socket assembly; wherein the plug assembly may be joined to the socket assembly by the securing device in a plurality of orientations (vertically, horizontally, inclined, declined, relative to a given vantage point) so that, in each of the plurality of orientations, when the plurality of splines in the plug mate with the plurality of receptacles in the socket, the plurality of first conduits automatically align the plurality of second conduits (see col. 3, lines 32-55); and wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary, and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of

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unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 2, wherein the plurality of splines further comprises a center spline (24) and a plurality of outer splines of equal dimensions, the outer splines sharing a common longitudinal axis with the center spline and having symmetry about the common longitudinal axis.

With respect to claim 3, wherein the securing device is a coupling collar adapted for connecting the plug and the socket, the coupling collar initially engaged with the plug. Refer to Fig. 2.

With respect to claim 7, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 8, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 9, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 10, wherein the first conduits and second conduits are adapted to receive a wire capable of carrying an electrical current.

With respect to claim 11, wherein the first conduits and second conduits are adapted to receive a material capable of carrying an optical signal.

With respect to claim 13, wherein the first tubing section and the second tubing are pipe.

With respect to claim 14, wherein the first tubing section and the second tubing section are casing.

With respect to claims 15-16, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 17, wherein the first tubing section and the second tubing are connectable in a plurality of orientations.

With respect to claim 18, Moon discloses an apparatus for providing power to a subterranean environment, comprising: a drilling assembly containing a plurality of tubing sections; a plurality of tubing joints for connecting the plurality of tubing sections together, each tubing joint comprising: a plug having a plurality of splines (10) and a plurality of first conduits (26); a socket having a plurality of receptacles (defined by splines 4) and a plurality of second conduits (holding prongs 21), the plurality of receptacles adapted to receive the plurality of splines of the plug; a securing device (11) for securing the plug to the socket; wherein the plug and the socket may be joined in N orientations (e.g. vertically, horizontally, angled, relative to a given vantage point) where N is equal to the number of splines; and wherein a plurality of transmission means (21) are automatically aligned for connectivity when the plurality of splines are inserted into the plurality of receptacles (see col. 3, lines 32-55) and are adapted for passage through the plurality of first conduits and the plurality of second conduits; and wherein the plug, the plurality of splines and the plurality of first conduits are of unitary

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construction (that is, the plug is unitary, the splines are unitary, and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 19, wherein the plurality of splines further comprise a center spline (24) and a plurality of outer splines of equal dimensions, the outer splines sharing a common longitudinal axis with the center spline and having symmetry about the common longitudinal axis.

With respect to claim 20, wherein the securing device is a coupling collar adapted for connection to the plug assembly and the socket assembly, the coupling collar initially engaged with the plug assembly.

With respect to claim 24, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 25, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 26, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 27, wherein the first conduits and second conduits are adapted to receive a wire capable of carrying an electrical current.

With respect to claim 28, wherein the first conduits and second conduits are adapted to receive a material capable of carrying an optical signal.

With respect to claim 30, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 31, wherein the first tubing section and the second tubing section are casing.

With respect to claims 32-33, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 34, wherein the first tubing section and the second tubing section are connectable in a plurality of orientations.

With respect to claim 35, Moon discloses a method of using a tubing joint to joint two tubing sections together, comprising: using a first tubing section (1) having a plurality of first conduits (26) and a proximate end having a plug attached and using a second tubing section (2) having a plurality of second conduits (holding prongs 21) and a distal end having a socket attached; aligning the first tubing section coaxially with the second tubing section; engaging the plug of the first tubing section with the socket of the second tubing section so that the plurality of first conduits align with the plurality of second conduits; and securing the first tubing section to the second tubing section (see col. 3, lines 32-55); wherein when a plurality of splines on the plug mate with a plurality of receptacles in the socket, the plurality of first conduits are aligned with the plurality of second conduits; wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary,

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and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 36, wherein the positioning step further comprises: positioning the first tubing section coaxially with the second tubing section such that the proximate end of the first tubing section is in close proximity with the distal end of the second tubing section (see col. 3, lines 32-55).

With respect to claim 37, wherein the positioning step further comprises: rotating the first tubing section in relation to the second tubing section such that a plurality of splines are positioned to properly mate with the plurality of receptacles in the socket of the second tubing section (see col. 3, lines 32-55).

With respect to claim 38, wherein the first tubing section is vertically above the second tubing section.

With respect to claim 39, wherein a plurality of first connectors (contacts) in the plurality of first conduits and a plurality of second connectors (21) in the plurality of second conduits are electrically coupled by inserting the plug into the socket.

With respect to claim 40, wherein a pair of optical connectors (contacts/21) are optically coupled by inserting the plug into the socket.

With respect to claim 41, wherein a coupling collar (11) is used to secure the first tubing section to the second tubing section.

With respect to claim 43, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 44, wherein the first tubing section and the second tubing section are casing.

With respect to claims 45-46, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 50, Moon discloses an apparatus for connecting a plurality of casing sections together comprising: a first casing section (1); a second casing section (2) removably connected to the first casing section; and wherein the first casing section and the second casing section are connectable in a plurality of distinct orientations (e.g. vertically, horizontally, angled, relative to a given vantage point); wherein a first plurality of transmission means (14/15/26) are adapted for location within the first casing section and a second plurality of transmission means (19/21/15') are adapted for location within the second casing section; and wherein in each of the plurality of distinct orientations, the first plurality of transmission means are aligned for connectivity with the second plurality of transmission means by mating a plurality of splines and a corresponding plurality of receptacles (see col. 3, lines 32-55).

With respect to claim 52, wherein the connection between the first casing section and the second casing section comprises: a plug affixed to the first casing section; a socket affixed to the second casing section; and a securing device (11) for securing the plug to the socket; and wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary,

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and the conduits are unitary)); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 53, wherein the securing device is a coupling collar adapted for connection to the plug and the socket, the coupling collar initially engaged with the plug.

With respect to claim 57, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 58, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 59, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 60, wherein the first transmission means and the second transmission means each comprise a plurality of wires adapted to carry an electrical current.

With respect to claim 61, wherein the first transmission means and the second transmission means each comprise a material to carry an optical signal.

With respect to claim 63, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 64, wherein the first tubing section and the second tubing section are casing.



With respect to claims 65-66, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Claims 1-5, 7-11, 13-22, 24-28, 30-41, 43-50, 52-55, 57-61 and 63-66 rejected under 35 U.S.C. 102(b) as being anticipated by Curlett (US 4,836,305).

With respect to claim 1, from Figs. 2, 6 and 11, Curlett discloses an apparatus comprising: a first tubing and a second tubing; a plug (105) fixedly engaged to a first tubing proximate end and having a plurality of first splines (100,104) and a plurality of first conduits (in 116); a socket (103) fixedly engaged to a second tubing distal end and having a plurality of receptacles (102,106) and a plurality of second conduits (in 126); a securing device (84) for securing the plug to the socket; wherein the plug may be joined to the socket by the securing device in a plurality of orientations (vertically, horizontally, inclined, declined, relative to a given vantage point) so that, in each of the plurality of orientations, when the plurality of splines in the plug mate with the plurality of receptacles in the socket, the plurality of first connectors automatically align the plurality of second connectors; and wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary, and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 2, wherein the plurality of splines further comprises a center spline (104) and a plurality of outer splines (100) of equal dimensions, the outer splines sharing a common longitudinal axis with the center spline and having symmetry about the common longitudinal axis.

With respect to claim 3, wherein the securing device is a coupling collar adapted for connecting it to the plug and the socket, the coupling collar initially engaged with the plug.

With respect to claim 4, wherein the plug further comprises fine threads. The threads can be considered fine, (refer to columns 8 and 9).

With respect to claim 5, wherein the socket further comprises coarse threads. The threads can be considered coarse, (refer to columns 8 and 9).

With respect to claim 7, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 8, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 9, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 10, wherein the first conduits and second conduits are adapted to receive a wire capable of carrying an electrical current.

With respect to claim 11, wherein the first conduits and second conduits are adapted to receive a material capable of carrying an optical signal.

With respect to claim 13, wherein the first tubing section and the second tubing are pipe.

With respect to claim 14, wherein the first tubing section and the second tubing section are casing.

With respect to claims 15-16, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 17, wherein the first tubing section and the second tubing are connectable in a plurality of orientations.

With respect to claim 18, Curlett discloses an apparatus for providing power to a subterranean environment, comprising: a drilling assembly containing a plurality of tubing sections; a plurality of tubing joints for connecting the plurality of tubing sections together, each tubing joint comprising: a plug (105) having a plurality of splines (100,104) and a plurality of first conduits (in 116); a socket (103) having a plurality of receptacles (102,106) and a plurality of second conduits (in 126), the plurality of receptacles adapted to receive the plurality of splines; a securing device (84) for securing the plug to the socket; wherein the plug and the socket may be joined in N orientations (vertically, horizontally, inclined, declined, relative to a given vantage point) where N is equal to the number of splines; and wherein a plurality of transmission (Fig. 7; 118, 120, 128) means are automatically aligned for connectivity when the plurality of splines are inserted into the plurality of receptacles (e.g. refer to Fig. 11) and are

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adapted for passage through the plurality of first conduits and the plurality of second conduits.

With respect to claim 19, wherein the plurality of splines further comprise a center spline (104) and a plurality of outer splines (100) of equal dimensions, the outer splines sharing a common longitudinal axis with the center spline and having symmetry about the common longitudinal axis.

With respect to claim 20, wherein the securing device is a coupling collar adapted for connection to the plug and the socket, the coupling collar initially engaged with the plug.

With respect to claim 21, wherein the plug further comprises fine threads. The threads can be considered fine, (refer to columns 8 and 9).

With respect to claim 24, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 25, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 26, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 27, wherein the first conduits and second conduits are adapted to receive a wire capable of carrying an electrical current.

With respect to claim 28, wherein the first conduits and second conduits are adapted to receive a material capable of carrying an optical signal.

With respect to claim 30, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 31, wherein the first tubing section and the second tubing section are casing.

With respect to claims 32-33, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 34, wherein the first tubing section and the second tubing section are connectable in a plurality of orientations.

With respect to claim 35, Curlett discloses a method of using a tubing joint to joint two tubing sections together, comprising: using a first tubing section (105) having a plurality of first conduits (in 116) and a proximate end having a plug assembly attached and using a second tubing section (103) having a plurality of second conduits (in 126) and a distal end having a socket assembly attached; aligning the first tubing section coaxially with the second tubing section; engaging the plug of the first tubing section into the socket of the second tubing section so that the plurality of first conduits align with the plurality of second conduits; and securing the first tubing section to the second tubing section; wherein when a plurality of splines on the plug mate with a plurality of receptacles in the socket, the plurality of first conduits are aligned with the plurality of second conduits; wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary,

and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 36, wherein the positioning step further comprises: positioning the first tubing section coaxially with the second tubing section such that the proximate end of the first tubing section is in close proximity with the distal end of the second tubing section.

With respect to claim 37, wherein the positioning step further comprises: rotating the first tubing section in relation to the second tubing section such that a plurality of splines are positioned to properly mate with the plurality of receptacles in the socket of the second tubing section.

With respect to claim 38, wherein the first tubing section is vertically above the second tubing section.

With respect to claim 39, wherein a plurality of first connectors (118) in the plurality of first conduits and a plurality of second connectors (128) in the plurality of second conduits are electrically coupled by inserting the plug into the socket.

With respect to claim 40, wherein a pair of optical connectors (118/128) are optically coupled by inserting the plug into the socket.

With respect to claim 41, wherein a coupling collar (84) is used to secure the first tubing section to the second tubing section.

With respect to claim 43, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 44, wherein the first tubing section and the second tubing section are casing.

With respect to claims 45-46, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. from a prior art apparatus satisfying the claimed structural limitations.

With respect to claim 47, Curlett discloses in a drill string of the type comprising a plurality of drill pipe sections arranged in end to end relation from a location above the ground to a lower location adjacent to an orientable tool connected to a bottom end of the drill string and wherein adjacent ends of the drill pipe sections are connected to each other to form a plurality of spaced pipe joints extending downwardly from the ground to the tool, an improvement comprising: a drill string in alignment from a top end to a bottom end thereof and wherein each pipe section is provided with a lower end having a plurality of splines (104,100) and an upper end having a plurality of receptacles (102,106) which is in alignment with and corresponds with the plurality of splines on the lower end of the same pipe section, and wherein each pipe joint comprises an upper drill pipe section having its splines received in corresponding receptacles in the next adjacent lower drill pipe section and wherein the splines and the receptacles can fit together in more than one orientation, wherein the adjacent end of the sections are threaded and wherein an internally threaded collar is received over the threaded ends to hold the drill pipe sections of each pipe joint securely together, and wherein a plurality of connectors (120,128) are aligned for connectivity when the splines of the upper drill pipe

section are received in the corresponding receptacles in the next adjacent lower drill pipe section.

With respect to claim 48, wherein the upper drill pipe section and the lower drill pipe section are provided with keyways (102,106) which are symmetrically related with respect to the longitudinal axis of the drill string and wherein keys (100,104) are affixed to the keyways of the upper drill section and are adapted to fit into the keyways of the lower drill pipe section.

With respect to claim 49, wherein the upper drill pipe section is provided with at least three downwardly extending legs (100,104) which are symmetrically arranged with respect to the longitudinal axis of the drill string and wherein the lower drill pipe section is provided with a corresponding number of recesses (102,106) arranged so as to receive the legs of the upper drill pipe section.

With respect to claim 50, Curlett discloses an apparatus for connecting a plurality of casing sections together comprising: a first casing section (105); a second casing section (103) removably connected to the first casing section; and wherein the first casing section and the second casing section are connectable in a plurality of distinct orientations (vertically, horizontally, inclined, declined, relative to a given vantage point); wherein a first plurality of transmission means (116/126) are adapted for location within the first casing section and a second plurality of transmission means (116) are adapted for location within the second casing section; and wherein in each of the plurality of distinct orientations, the first plurality of transmission means are aligned for connectivity



with the second plurality of transmission means by mating a plurality of splines and a corresponding plurality of receptacles.

With respect to claim 52, wherein the connection between the first casing section and the second casing section comprises: a plug affixed to the first casing section; a socket affixed to the second casing section; and a securing device (84) for securing the plug to the socket; and wherein the plug, the plurality of splines and the plurality of first conduits are of unitary construction (that is, the plug is unitary, the splines are unitary, and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary).

With respect to claim 53, wherein the securing device is a coupling collar adapted for connection to the plug and the socket, the coupling collar initially engaged with the plug.

With respect to claim 57, wherein the first tubing section and the second tubing section are connectable in two distinct orientations.

With respect to claim 58, wherein the first tubing section and the second tubing section are connectable in three distinct orientations.

With respect to claim 59, wherein the first tubing section and the second tubing section are connectable in four or more distinct orientations.

With respect to claim 60, wherein the first transmission means and the second transmission means each comprise a plurality of wires adapted to carry an electrical current. Refer to Fig. 7.

With respect to claim 61, wherein the first transmission means and the second transmission means each comprise a material to carry an optical signal. Refer to Fig. 7.

With respect to claim 63, wherein the first tubing section and the second tubing section are pipe.

With respect to claim 64, wherein the first tubing section and the second tubing section are casing.

With respect to claims 65-66, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations.

Claims 47-50, 52-59 and 63-66 are rejected under 35 U.S.C. 102(b) as being anticipated by Wilson (US 1,781,091).

The Wilson apparatus illustrates two drill pipe tubing sections for wells joined together including a plug assembly 1 having a plurality of splines 6 and a socket assembly having a plurality of receptacles adapted to receive the plurality of splines. A couple of the splines have been interpreted as the first plurality of connectors, and a couple of the receptacles have been interpreted as the second plurality of connectors. Similarly, a couple of the splines have been interpreted as the first plurality of transmission means insofar as they transmit force, and a couple of the receptacles have been interpreted as the second plurality of transmission means insofar as they transmit force. A threaded securing device 3 for securing a plug assembly to the socket

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assembly wherein the plug assembly and the socket assembly can be joined multiple orientations (vertically, horizontally, inclined, declined, relative to a given vantage point) in relation to the number of splines. As to claim 52, wherein the plug, the plurality of splines and a plurality of first conduits (of the string) are of unitary construction (that is, the plug is unitary, the splines are unitary, and the conduits are unitary); and wherein the socket, the plurality of receptacles, and the plurality of second conduits (of the string) are of unitary construction (that is, the socket is unitary, the receptacles are unitary, and the conduits are unitary). As to claim 53, the coupling collar can be initially engaged with the plug assembly 1. As to claim 54, the threads can be considered fine. As to claim 55, the threads can be considered coarse. As to claim 56, the threads as shown in Fig. 1 are tapered. As to claims 57-59, the two tubing sections are connectable in two, three, and four or more distinct orientations. As to claims 63-64, the tubing sections are pipe or casing. Claim 65-66 are considered intended use claims and do not patentably define over the prior art since the tubing sections can be used in many different instances.

### ***Response to Arguments***

Applicant's arguments filed 8/21/06 have been fully considered but they are not persuasive.

Refer to the explanations provided in the above-noted art rejections.

***Conclusion***

An RCE has been filed in the instant application. All claims are drawn to the same invention and could have been finally rejected on the grounds and art of record in the next Office action if they were entered in the seminal application. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action in this case. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no, however, event will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

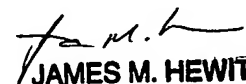
Any inquiry concerning this communication or earlier communications from the examiner should be directed to James M. Hewitt whose telephone number is 571-272-7084.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Stodola can be reached on 571-272-7087. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMH  
10/24/06

  
**JAMES M. HEWITT**  
**PRIMARY EXAMINER**